



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/873,505 06/04/01 CAO

H 1928,PC

EXAMINER

HM22/0917

THOMAS F. ROLAND
NATIONAL STARCH AND CHEMICAL COMPANY
10 FINDERNE AVENUE
BRIDGEWATER NJ 08807-0500

VII.G

ART UNIT

PAPER NUMBER

1619

DATE MAILED:

09/17/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/873,505

Applicant(s)

CAO ET AL.

Examiner

Gina C. Yu

Art Unit

1619

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/4/2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1. 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be in consecutive order. The second claim 22 which follows claim 24, has been renumbered to claim 25.

Claim 9 is objected to as it is missing a period.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8, 17-19, and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 is rejected because the phrase "such as" renders the claim indefinite. It is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim 8 is also rejected because the terms "colors" and "over-the-counter actives" renders the claim vague and indefinite.

Claims 17-19 are rejected because the term "a hydrophobic compound" renders the claims vague and confusing. The starch-encapsulated hydrophobic compound itself is a hydrophobic compound, and it is not clear what the basis of the weight of the starch-encapsulated hydrophobic compound is.

Claim 25 is rejected as the claim recites the limitation "the process" in claim 21. There is insufficient antecedent basis for this limitation in the claim, and the claim is confusing and indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(A) Claims 1, 3, 5, 8, 9-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Blue et al. (U.S. Pat. No. 5,935,826).

Blue et al. disclose aqueous compositions comprising hydrophobically modified starches used as emulsifying and/or encapsulating agents. See abstract; col. 1, line 7 – col. 7, line 63. The illustration of encapsulation of orange oil with starch is disclosed in Example 3. See also Examples 4-6.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

(A) Claims 1-4, and 8-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wurzburg et al. ("Modified Starches: Properties and Uses", 1986) in view of Eskin et al. (U.S. Pat. No. 5,882,713).

Wurzburg et al. teach starch-encapsulation of flavors and other water-repellent actives for deodorant sprays. See p. 141. In view of the teaching that the released flavors form an emulsion with water, examiner asserts that the disclosed flavor agents are also water-repellents. The use of modified starch and natural starch is also disclosed. The starch-encapsulation in the reference does not stay intact in water, unlike required by the instant claim, and the reference also fails to teach preparing the composition by jet cooking.

Eskins et al. disclose non-separable compositions of starch and water-immiscible materials in aqueous solution in the absence of emulsifying agents, which meets claim 1 and 20. See abstract. The reference teaches the invention may be used in pharmaceutical, cosmetic and personal care product formulation, including sun tan lotions, meeting instant claim 21. See col. 13, lines 55 – 63. The composition is prepared by jet cooking the starch and the water-immiscible, drying the dispersion, and

Art Unit: 1619

redisperse the mixture in water to form smooth, stable, and nongreasy dispersions, which meets instant claims 2, 24, and 25. See col. 8, line 64 – col. 13, line 21. The starch in instant claims 4 is disclosed. See col. 6, line 56 – col. 7, line 19. The water-immiscible materials of instant claim 8, and the weight range of the components of the composition are disclosed in col. 7, line 20 – col. 8, line 63. The use of water-soluble polymers or thickeners are disclosed in col. 12, lines 46 – 66, meeting claim 21. The reference does not explicitly mention the use of solvents, as required in instant claim 22. However, it teaches that the selected water-immiscible materials are those that are not soluble both in water and organic solvents, suggesting the use of solvents. Furthermore, one of ordinary skill in the art would have known to use suitable solvents for formulating a cosmetic composition.

Given the general teaching of the use of starch encapsulation of water-repellant actives for slow release in Wurzburg et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to have looked to the prior arts such as Eskin et al. for a specific method of mixing starch and hydrophobic actives because of the expectation of successfully producing cosmetic compositions that are stable, smooth, lump-free, and nongreasy.

(B) Claims 3, 5, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wurzburg et al. and Eskin et al., as applied to claims 1, 2, 8-21, and 23-25 above, and further in view of Roulier et al. (EP 0938892 A1, Translation).

Wurzburg et al. and Eskin et al. are discussed above. The specific types of modified starches of the instant claims 3, 5, and 7 are not explicitly disclosed, although

the reference teaches that certain compositions may require the properties of modified starches.

Roulier et al. teach cosmetic powder composition comprising 5 –70 wt % of modified starch and 30-95 wt % of oily phase. The modified starch of instant claims 3, 5, and 7 are disclosed in p. 5, [0019]. The advantages of the invention, including the applicability to all types of skin without leaving greasiness, easy and rapid usability. P. 2, [0013-14].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the composition of the combined references by substituting the modified starch for the natural starch, as suggested by Roulier et al. because of the expectation to successfully producing cosmetic composition containing water-immiscible materials for all types of skin without leaving greasiness which provide easy and rapid application.

(C) Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wurzburg et al., Eskins et al. and Roulier et al. as applied to claims 1-3 and 5-25 above, and further in view of Fletcher et al. (U.S. Pat. No. 6,261,543 B1).

The combined references are discussed above. They lack the specific teaching of employing cationically modified starch in the composition.

Fletcher et al. teach viscous antiperspirant aqueous emulsions comprising amphoteric or cationic modified starch. See abstract; col. 1, line 7 – col. 35; col. 7, lines 6 – 30. The reference teaches that the compositions exhibit excellent phase stability

even in the high concentrated antiperspirant salts in the solution and elevated storage temperature. See col. 2, line 53 - col. 19, line 22.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the composition of the combined references by substituting the cationic modified starch for the disclosed starches, as suggested by Fletcher et al., because of the expectation of successfully producing a cosmetic composition containing water-immiscible materials with good phase stability.


Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gina C. Yu whose telephone number is 703-305-3593.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diana Dudash can be reached on 703-308-2328. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1234.

Gina C. Yu
Patent Examiner
September 10, 2001


DIANA DUDASH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600